

## IN OUR BACKYARD

AUG 30 1991



## AN UPDATE FROM THE ALBERTA SPECIAL WASTE MANAGEMENT CORPORATION

## Proposed Expansion of the Alberta Special Waste Treatment Centre: Next Steps

August 1991  
Volume 2  
Number 3

During April and May, informational meetings were conducted in seventeen Alberta communities to review the draft Environmental Impact Assessment (EIA) on the proposed expansion of the Alberta Special Waste Treatment Centre. The public input gained at these meetings was then incorporated in the final EIA and submitted to the Department of the Environment for approval.

At a cabinet meeting on June 5th, the proposed expansion was deemed to be a reviewable project under section 4(f) of the Natural Resources Conservation Board Act. The proposal was referred to the newly-formed NRCB by

the Lieutenant Governor in Council on the recommendation of Environment Minister Ralph Klein. Subsequently, the NRCB announced a pre-hearing conference open to all affected stakeholders, which was held in Swan Hills on July 3rd.

During this latter session, representatives from eight environmental groups together with Alberta Environment, the Alberta Trappers' Association, the Alberta Special Waste Services Association, the Swan Hills Liaison Committee, and the Town of Swan Hills, presented their viewpoints. Topics discussed included: the content of the application; the need for the project; the need for

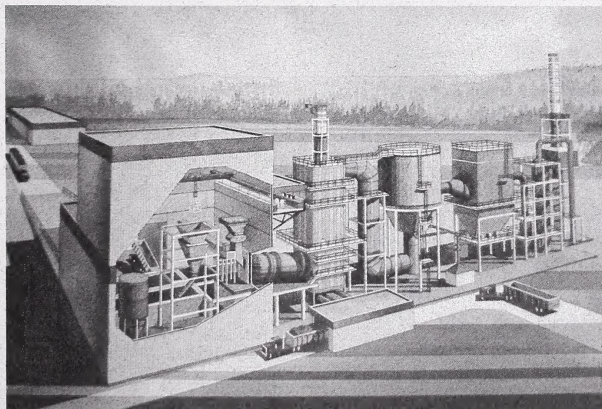
formal public hearings; the timing of such hearings if required; and funding for intervenors.

The three-member board is now considering these presentations and will later review the application of Chem-Security (Alberta) Ltd. and Alberta Environment's technical review of the final EIA. Board members are Chairman Gerry DeSorcy, Vice-Chairman Dr. Tony Yarranton, and Charles Weir.

It is expected that the six-teen government agencies reviewing the final EIA will have completed their work by the end of August. A public hearing date has been set for November 12th in Swan Hills.

- ▲ NEXT STEPS
- ▲ THE EUROPEAN EXPERIENCE
- ▲ THAT'S A WRAP
- ▲ PROFILE
- ▲ ALTERNATIVES
- ▲ GREETINGS CARD CONTEST
- ▲ SWAN HILLS HONOURED
- ▲ CALL DIRECT

Produced every two months by the Alberta Special Waste Management Corporation, "In Our Backyard" is intended to keep Albertans updated on issues and solutions in hazardous waste management. You can contribute to the process by "recycling" this newsletter. Pass it on to a friend with your comments. And should you have suggestions you wish to share, pass them on to us. Our address, phone and fax number are on Page 6.



*Proposed expansion would progress wastes from waste feed building (left) into tilted rotary kiln and secondary combustion chamber (the vertical oblong structure) then through an S-shaped duct into the spray dryer, electrostatic precipitators and wet scrubber (the three structures on the right).*



Alberta  
Special Waste  
Management  
Corporation  
AN ALBERTA CROWN CORPORATION

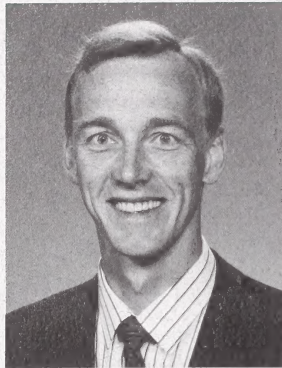
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# The European Experience

*"No matter how successful we are in managing and treating special wastes, we don't have a monopoly on good ideas. Just as we are constantly developing new techniques and methods, other groups in other countries are evolving their own procedures. It makes good sense to study our neighbours' successes or failures and see how they relate to our operation. Ultimately, we all benefit."*

**Mark P. Polet**



Mark P. Polet,  
Vice-President Operations,  
Alberta Special Waste  
Management Corporation

It's hardly the kind of trip your travel agent will recommend: A short stay in England for a meeting on occupational health and a discussion of energy audits; a jump over to Europe for a tour of a waste treatment site in Denmark and a visit to an industrial plant in Germany; a flight to Turkey to present a paper at an environmental symposium; a return to Scandinavia for a plant visit in Denmark and a conference in Sweden; a journey down to the Netherlands for discussions on Toxic Round Ups; a switch back to Denmark to see a recycling plant; a hop to France to present a paper at a Hazardous Waste Disposal symposium as part of a Canada – Europe meeting on Environment and Waste; ending with a channel crossing to England for a flight to Toronto and Calgary.

This was the itinerary followed by Mark Polet, ASWMC's Vice-President Operations, when he visited Europe in May.

## FIFTEEN CITIES

Seventeen separate airline flights. Two lengthy train excursions. And visits to fifteen major cities in fifteen days.

It's a credit to his endurance that he returned full of enthusiasm for Alberta's waste management program, and eager to discuss new ideas now being explored in Europe.

*"In comparing Alberta's program with those of other jurisdictions, it's gratifying to see how successful we've been in the establishment and operation of our system.*

*I believe the reason for this lies in open public communication. Our program started at the grass roots level. It responds to the stated needs of householders, business and industry. The opposite is true in certain European jurisdictions which, traditionally, have operated from the top down. When waste management solutions are imposed arbitrarily, it's hard to generate a spirit of cooperation."*

Nevertheless, says Mark, progress is being made. And Alberta can gain a great deal from studying the European model and by sharing ideas—particularly in the area of technical innovation. He's enthusiastic over pre-treatment methods being explored in Denmark and new pollution control

systems being introduced in Germany.

*"The Kommunekemi operation in Denmark – their equivalent of our own special waste management organization – is looking at something called a 'pre-shredder'. This is equipment which reduces certain waste materials into a slurry, making them easier to handle and speeding the waste flow. Innovations like this can bring down our costs and improve our efficiency."*

In Germany, he traded ideas and information at the HIM Beibschheim plant near Frankfurt – where two incinerators (larger versions of the type used at Swan Hills) are operated at one location and a third is planned, in close proximity to residential areas.

## SYSTEMS

*"This visit to the Ruhr valley was very productive. I've got a lot of information to digest on barrel storage and heat recovery. But by far the most promising advances are being made in pollution control. In anticipation of new European Community guidelines, the Germans are developing extremely efficient systems – the kind likely to be incorporated into the incinerator proposed for the Treatment Centre expansion."*

In Turkey, Mark presented a paper on Technology Transfer to Developing Nations, and discovered a country that was culturally stimulating and environmentally progressive.

*"Turkey, particularly the Marmara area, is trying to cope with population increases of 500,000 people a year in Istanbul alone. It's faced with providing clean water and sewage services as well as waste disposal facilities. Despite these pressures, it is responding vigorously and is a committed member of MEDPOL, the Mediterranean Pollution Control Program."*

After checking out the

toxic waste collection system in the Netherlands, where communities have permanent toxic waste drop-off locations, Mark returned to Sweden.

*"At Ronneby, I had the opportunity to see a recycling plant which distills mercury from used fluorescent tubes and batteries. The mercury is reused and the glass is recycled. It's not hard to imagine a similar operation in Alberta."*

## NO SOLUTION

In a trip that revealed so many positive trends, were there any negatives?

*"One thing that became apparent at the Stockholm conference was an increasing level of frustration with the approval process for waste disposal facilities. Countries have taken the alternative of storing hazardous wastes underground – which is not a solution. It is very disturbing. It's hoped that EC guidelines may help to resolve this."*

At the Canada – Europe discussions in Montpellier, Mark found much enthusiasm for Alberta's efforts in special waste management – particularly for the Pesticide Container Program.

*"The general reaction was, 'How do you do it?'" says Mark. "And there were quite a few raised eyebrows when I explained that this program owes its success almost entirely to the initiative and enthusiasm of Alberta farmers. The concept of voluntary cooperation with the waste collection authority – which makes such good sense to us – seemed like a pipe dream to many of the people at the conference."*

All in all, says Mark Polet, the European experience was both informative and stimulating.

*"It provided a host of new ideas and a lot of practical information. And it confirmed that we're going in the right direction."*



# That's a WRAP

**"WASTE REDUCTION ALWAYS PAYS,"  
SAYS DOW CHEMICAL CANADA**

Reduce. Re-use. Recycle. Recover. Encouraging the celebrated '4 Rs' of environmental management is an important function of the Alberta Special Waste Management Corporation. Waste minimization, in particular, is an area in which we are becoming increasingly active – working with provincial industries to assist or enhance their on-site programs.

One of the most progressive of these is the WRAP program in operation at the Dow Chemical plant in Fort Saskatchewan, thirty kilometres east of Edmonton. Adapted from a similar program operating in the company's U.S. division, it's based on the idea that, "Waste reduction always pays."

Prasad Puttagunta, an Environmental Engineer at Dow's Fort Saskatchewan site, oversees the continuing waste minimization project – a responsibility that's taking on even greater importance as Dow looks forward to the completion of its \$800 million expansion project, announced in September 1988.

*"This operation is one of the largest chemical manufacturing facilities in Canada," says Prasad, "with eight world-scale plants producing a range of essential products. Chlorine is used in manufacturing everything from soap to swimming pool cleaner. Vinyl Chloride is used to make piping, raincoats and furniture. Ethylene Oxide and Ethylene Glycols are major components of such things as antifreeze, polyester fibres, inks and dyes. And Polyethylene pellets are extruded into plastic bags and*

*food packaging. We also produce STYROFOAM\* from the largest plant of its kind in North America."*

With such a variety of chemicals being used, maintaining high standards of waste management is not an easy task.

*"It should be emphasized that most of the chemicals we make are stringently regulated under the Transportation of Dangerous Goods Act. Consequently, our handling procedures and precautions are already first rate."*

*There are instances, however, where even the best*

*existing technology cannot prevent small spills or chemical emissions. In such cases, we are faced with cleaning up the spill and disposing of the waste through the Alberta Special Waste Management System.*

*It's a responsibility we accept but an expense we would just as soon avoid."*

The WRAP program serves to counter such problems. Under this Dow initiative, each of the production plants has a designated waste reduction representative who constantly looks for ways to minimize losses, spills and escapes. These representatives meet regularly with the WRAP coordinator to review changes and improvements.

*"The program has been very effective so far," says Prasad Puttagunta, "and you can expect it to get even better. For example, some time ago,*

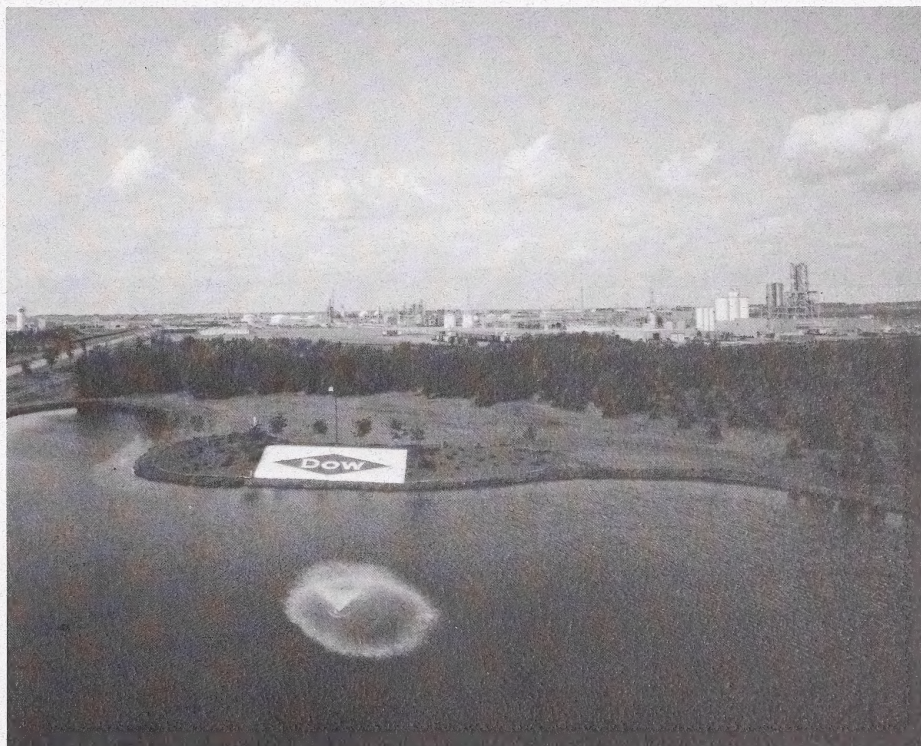
*we set ourselves the goal of reducing our air emissions by 50 percent by the year 1995.*

*This involved an exhaustive inventory of every single process on site – a job involving about 60 chemical compounds.*

*We discovered exactly where emissions are capable of occurring and we came up with counter measures. Unfortunately, the potential cost of these procedures totalled approximately \$8 million – so, as you can imagine, we presented it to management with some trepidation. It's a measure of Dow's level of commitment that we not only received almost immediate approval for the expenditure but positive encouragement for our efforts."*

Especially significant about the \$8 million commitment is that it comes at a time

*Continued on next page*



*The Dow Chemical plant in Fort Saskatchewan is one of the largest chemical manufacturing facilities in Canada.*





*By separating discarded materials into identified containers, Dow maintenance personnel reduce the volume of waste requiring special treatment.*

when business is far from booming.

"It's true," agrees Prasad, "that this investment will not produce any short-term economic benefit. And any savings in the long term will be minimal. The whole point here is that Dow is putting environmental benefits ahead of corporate gain, and in doing so, has established a new set of priorities for industry generally. We're very proud of what we're doing. And we've had a very positive response from our customers."



*Environmental Engineer Prasad Puttagunta oversees the WRAP project.*

## How Dow Does It: SOME RECENT SUCCESSES AT FORT SASKATCHEWAN

▲ Up to a year ago, the STYROFOAM® processing plant used CFCs, so-called 'greenhouse gases', as an expanding agent in the manufacture of insulating board. When the possible effects of CFCs became known, the plant converted to an ozone-friendly gas – two years before the new emissions standards now required by the Montreal Protocol.

▲ Dow is reviewing all its refrigeration systems in its determination to eliminate FREON 11 – a contributor to ozone depletion. Existing plants and all new plants will use FREON 500, which has 100th of the impact of FREON 11 on the ozone layer. Research will continue in this area.

▲ An Off the Water Team is examining all present emissions to water; the intent being to eliminate all releases entering the North Saskatchewan River. The plants will

continue to use water from the river but no pollutants will be returned.

▲ To reduce the volume of materials being sent to the Alberta Special Waste Treatment Centre, Dow is looking at the type and origin of wastes. Maintenance personnel now separate wastes into identified dumpsters labelled WOOD, PAINT, METAL and so on. "By keeping recyclables separate from contaminated wastes, we reduce the volume of waste that needs to go to the Treatment Centre," says Prasad Puttagunta. "That saves us time and money."

▲ One on-going project is the replacement of underground storage tanks with above-ground tanks to avoid losses and soil contamination through corrosion. The new raised tanks are fitted with secondary leak protection – rather like a leak tray in a kitchen stove.

▲ Storage tanks in Dow's Vinyl plant are fitted with a small vent to permit air movement during emptying or filling. These processes permit a little liquid to vaporize and escape through the vent. To correct this, one WRAP project calls for connecting these vents to a pipeline then directing the emissions to a scrubber to



*Prasad Puttagunta: "The program has been very effective so far...and you can expect it to get even better."*

remove impurities. The cost of designing and installing this simple adjustment is calculated at \$800,000.

\* Trademark of the Dow Chemical Company

## Spare that Tree

By operating a paper recycling program, you help preserve our forests and you create Canadian jobs and opportunities for Canadian companies. At present, Canadian paper mills are buying about 500 000 tonnes of waste paper from the United States every year. That's an order that could easily be filled in Canada if we had more paper recycling programs.





## Alberta Special Waste Management Corporation

610, 10909 JASPER AVENUE, EDMONTON, ALBERTA, CANADA T5J 3L9 (403) 422-5029 FAX (403) 428-9627

### THE ASWMC CHRISTMAS CARD CONTEST

The second annual "Joy to the World" Christmas Card contest, sponsored by the Alberta Special Waste Management Corporation, is now underway! The aim of the contest is to find a special piece of children's art, with an appropriate environmental theme, to feature on the Alberta Special Waste Management Corporation's 1991 Christmas Card. Rules and contest procedures follow:

#### PARTICIPANTS

The contest is open to children between the ages of 6 and 12 in Alberta, and while teachers at elementary schools are encouraged to enter their student's work in the contest, other community-based associations or programs involving children in this age category may also enter the contest.

#### FORMAT

Artwork should be completed in colour, in any medium (crayon, paints, pastels, paper cutouts etc.) and should be prepared on paper at least 8 1/2 x 11 inches in size. Artwork may be larger, but should not exceed 24 x 36 inches.

All artwork must have identification on the back, which includes: Artist's name, age, grade, school and name of the teacher and address to which the artwork should be returned.

#### ENTERING THE CONTEST

Completed artwork must be sent directly to Alberta Special Waste Management Corporation, #610, 10909 Jasper Avenue, Edmonton, Alberta, T5J 3L9, and marked "CHRISTMAS CARD CONTEST".

Care should be taken when preparing the artwork for shipping; inserting a piece of cardboard will help prevent bending or tearing.

Entries **MUST** be received by 5:00 p.m., Friday, October 18th, 1991.

Entries will be returned to entrants, as long as it is clearly specified where the entries are to be forwarded. ASWMC assumes no responsibility for lost or undelivered entries.

#### JUDGING

All entries will be judged by a panel of professional designers and educators, whose decision will be final. Originality, clarity of the environmental message, and seasonal theme will all be considered as important criteria for consideration, as will the enthusiasm, colour and spontaneity conveyed by the artwork.

## **PRIZE**

All entries received by the October 18th deadline will be considered by the panel of judges, and the winner will be announced November 15th.

The winner will receive a framed copy of the "There is a Better Way" poster, and a \$100.00 gift certificate from a local bookstore for that student's school or community group.

The winner's artwork will become the property of ASWMC and will be featured on the Corporation's 1991 Christmas Card, and possibly, in other printed materials. The winner will also receive 25 printed Christmas Cards for their own use.

## **All Entrants**

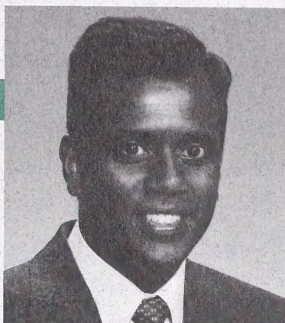
Each individual who enters a piece of artwork in the "Joy to the World" Christmas Card Contest will receive an Alberta Special Waste Management Corporation fridge magnet.



## Profile

### Jay Nagendran

M. Sc., P. Eng., D.E.E.  
Environmental Manager  
Alberta Special Waste  
Management Corporation



For the past sixteen years, Jay Nagendran has been active in the cause of environmental protection. A graduate in chemical engineering from the University of California, he began his career with Alberta Environment in 1975, working on Standards and Approvals for the branches of Water Quality and Municipal Engineering. Between 1975 and 1989, he progressed from Engineer to Regional Engineer to Senior Environmental Engineer, and eventually, Section Head.

During this period, he completed his Master of Science degree in Environmental Engineering at the University of Alberta, graduating in 1980.

It is an indication of his expertise in his chosen field that, in January 1989, Jay Nagendran was selected by Dalhousie University to work on an Environmental Management Development project in Indonesia which was funded by the Canadian International Development Agency (CIDA).

"It was," he says, *the most exhilarating experience of my career.*"

In the course of the CIDA project, Jay served for nine

months as the Canadian Advisor to the Indonesian State Ministry of Population and Environment, working with government and industry leaders to clean up the country's badly polluted river systems.

The task involved working with eight of the 27 Indonesian provinces to identify which river basins were the most polluted. It also involved him in the establishment of wastewater standards for 14 major industrial sectors.

The progress made in Indonesia's water quality program, says Jay, is remarkable – and a credit to that nation's Ministry of Environment.

*"It shows how enlightened administrators can make a huge difference. With a little help from us at the outset, they have initiated lasting environmental protection in areas where it was formerly considered an impossibility."*

On his return to Canada, Jay was appointed Project Manager of Alberta Environment's Corporate and Strategic Management Division. This special assignment called for him to lead a task force of environmental

and legal specialists assigned to draft new environmental legislation for Alberta. The work of the task force resulted in the proposed Alberta Environmental Protection and Enhancement Act.

In August of 1990, Jay joined Alberta Special Waste Management Corporation as Environmental Manager, taking responsibility for environmental and operational activities.

Included in his array of responsibilities is the coordination of regulatory requirements, the management of an extensive environmental monitoring program, and involvement with the proposed expansion of the Alberta Special Waste Treatment Centre.

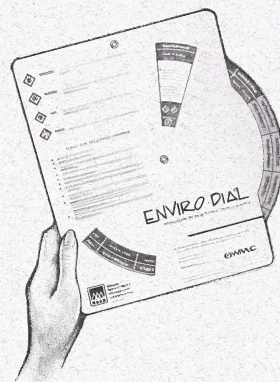
As the father of two children, Jay believes that we should direct our best efforts to the early treatment of all potentially dangerous wastes rather than allowing them to accumulate for future generations. The more we apply ourselves to the continuing development of waste treatment systems, he points out, the better those systems will become.

In the meantime, he is happy to be making a difference.

*"With so much concern over potential damage to our global environment, it's a privilege to work in an area which is finding effective solutions to the problem of hazardous waste management."*

## A Good Turn for the Environment

Want to do the environment a good turn? Send for this handy ENVIRO-DIAL. Produced by the Alberta Special Waste Management Corporation, it shows you alternatives to environmentally-hazardous household products at the simple turn of a dial. Single copies are available by calling 1-800-272-8873. Or write: **ENVIRO-DIAL, ASWMC, #610, 10909 Jasper Avenue, Edmonton, Alberta T5J 3L9**



### A LOAD OF GARBAGE

Canadians are throwing some **\$1.5 billion** into the garbage every year.

That's what it costs us to dispose of the increasing volume of garbage generated in our homes, schools, institutions and businesses.

The average Canadian throws away an estimated 500 kilograms - which adds up to two tonnes a year for a family of four.

If that isn't silly enough for you, consider that much of this garbage is hazardous to our air, land and water - so we end up paying more money to correct health problems and environmental damage.

## Alternatives

Product	Hazard	Recommended Disposal Method	Alternative
Tub & Toilet Bowl Cleaners	Toxic, Corrosive	Store in a safe place (cool, dry, out of children's reach) until they can be delivered to a Toxic Round Up.	Use baking soda or borax with a scrub brush to clean surfaces.  For mould, spray tiles with undiluted vinegar, wait half an hour, then scrub with brush and water.



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MANAGEMENT CORPORATION  
610 - 10909 Jasper Ave.  
Edmonton, Alberta  
T5J 3L9

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4752  
Edmonton, Alta.

## Card Contest for Schools

Teachers, please note. Once again, this year, the Alberta Special Waste Management Corporation is inviting every elementary school in Alberta to take part in its children's Greetings Card Contest.

Youngsters between the ages of 6 and 12 are invited to submit their original designs for a card celebrating the festive season, based on the theme of the 4 Rs: Reduce, Re-use, Recycle, Recover.

Entries will be judged by a panel of designers and educators with the winning entry being used for the Corporation's 1991

greetings card. The closing date for entries is October 18th, 1991.

The winner will receive a \$100 gift certificate for his or her school library together with an appropriate personal souvenir. All children entering will receive a token of appreciation. For contest information, please call Janyne Sinclair at 1-800-272-8873 or 422-5029 (Edmonton).

## Swan Hills Honoured

Among the more than 5,500 delegates attending the 84th Annual Meeting of the international Air & Waste Management Association in Vancouver in June was Wilbur Peters, Mayor of Swan Hills.

The mayor (left) was on hand to accept a special community award on behalf of the citizens of Swan Hills.

The award, being presented here by Charles Pratt, president of the association, recognizes the town's 'exemplary leadership as the host community of the Alberta Special Waste Treatment Centre and its contribution to effective and safe hazardous waste treatment and disposal.'



The Air & Waste Management Association is a non-profit technical and educational organization with more than 12,000 members in over 50 countries. It provides a forum for the discussion of technical, scientific, economic, political, social and health-oriented issues related to the environment.

## CALL DIRECT:

### ▲ For information on:

- Hazardous Waste Management Programs in Alberta
- Toxic Round Ups
- Community Study Groups
- Used Oil Program

**ALBERTA SPECIAL  
WASTE MANAGEMENT  
CORPORATION**  
1-800-272-8873  
422-5029 (Edmonton)  
428-9627 (Fax)

- ### ▲ For information on the transportation of dangerous goods:
- ALBERTA PUBLIC  
SAFETY SERVICES**  
1-800-272-9600 (24 Hours)

### ▲ For a directory of waste management companies in Alberta:

**ALBERTA SPECIAL  
WASTE SERVICES  
ASSOCIATION**  
424-6384 (Edmonton)  
Hot Line (for small businesses)  
1-800-661- Waste (9278)

### ▲ For information on:

- Recycling: Newspaper, Metals, Plastics, Clothing
- RECYCLING BRANCH,  
ALBERTA ENVIRONMENT**  
427-5838 (Edmonton)  
297-5925 (Calgary)

### ▲ To report an environmental emergency or to register a complaint:

**POLLUTION CONTROL  
DIVISION, ALBERTA  
ENVIRONMENT**  
1-800-222-6514 (24 Hours)

### ▲ To access the clearing house that puts potential users of waste materials in contact with waste producers:

**ALBERTA WASTE  
MATERIALS  
EXCHANGE**  
450-5408 (Edmonton)

**ALBERTA SPECIAL  
WASTE MANAGEMENT  
CORPORATION**  
610 - 10909 Jasper Ave.  
Edmonton, Alberta  
T5J 3L9



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